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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/650,275	08/29/2000	German Gutierrez	19717-001510US	8800
23363	7590	07/08/2004	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			NADAV, ORI	
PO BOX 7068			ART UNIT	PAPER NUMBER
PASADENA, CA 91109-7068			2811	

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/650,275

Applicant(s)

GUTIERREZ, GERMAN

Examiner

ori nadav

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period of Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 14-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/04/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: On page 5, line 25, the phrase "seal ring 302" should read "seal ring 300"..

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-8 and 14-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed limitations of an elongate region being electrically isolated from the remainder of the substrate except at the gap means that the elongate region is not electrically isolated from the region wherein the elongate region is absent (the gap). There is no support in the specification for an elongate region being electrically isolated from the remainder of the substrate except at the gap, as recited in claims 1, 14 and 18.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 and 14-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed limitations of an elongate region being electrically isolated from the remainder of the substrate except at the gap, as recited in claims 1, 14 and 18, are unclear as to how the elongate region is electrically isolated from the region it contacts (remainder of the substrate) and not electrically isolated (conductive) in a region wherein it is absent (the gap).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 18, insofar as in compliance with 35USC§112, are rejected under 35 U.S.C. 102(b) as being anticipated by Joardar et al. (5,475,255).

Joardar et al. teach in figure 1 a semiconductor device comprising a die seal structure for a semiconductor die having a first conductivity type silicon substrate comprising an elongate region 106 extending around a major portion of the periphery of the substrate and having a gap between ends of the elongate region along a minor portion of the

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periphery; the elongate region being electrically isolated from the remainder of the substrate except at the gap and

a passive conductive seal ring 107 extending around the entire periphery of the die in contact with the die at the elongate region 106 and in direct contact with the substrate at the gap.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-4, 6-7, 14-17, 19-21 and 23-24, insofar as in compliance with 35USC§112, are rejected under 35 U.S.C. 103(a) as being unpatentable over Joardar et al. (5,475,255) in view of Miyata (5,491,658).

Joardar et al. teach in figure 1 substantially the entire claimed structure, as applied to claim 1 above, except an elongate region comprising an elongate well.

Miyata teaches in figures 8 and 9 an elongate region comprising an elongate well 131.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use an elongate region comprising an elongate well in Joardar et al.'s device in order to improve the noise isolation of the device and in order to protect

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the device from an electrostatic damage by absorbing the an electrostatic surge in a well region.

Regarding claims 2, 14 and 19, Joardar et al. and Miyata teach an elongate well region of a second conductivity type, and a substrate of a first conductivity type .

Regarding claims 3-4, 15-16 and 20-21, it is conventional to reverse the polarity of the transistor. Therefore, it would be obvious to reverse the polarity, as claimed.

3. Claims 5, 8, 22 and 25-27, insofar as in compliance with 35USC§112, are rejected under 35 U.S.C. 103(a) as being unpatentable over Joardar et al. and Miyata, as applied to claims 1, 14 and 18 above, and further in view of Applicant's Admitted Prior Art (AAPA).

Joardar et al. and Miyata teach substantially the entire claimed structure, as applied to claims 1, 14 and 18 above, except an elongate region comprises an elongate dielectric region. AAPA teaches in figure 1 an elongate region comprises an elongate dielectric region. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use an elongate region comprises an elongate dielectric region in Joardar et al. and Miyata's device in order to provide better noise isolation to the device with a conventional seal ring.

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Regarding claims 8 and 25, AAPA teaches in figure 1 a conductive seal ring comprises a multi layer structure of alternating conducting and insulating layers, and wherein vias are formed in the insulating layers.

Regarding claim 26, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use an elongate region comprising oxide in prior art's device, because oxide is a conventional insulating material, of which official notice is taken.

Regarding claim 27, AAPA teaches in figure 1 a conductive seal ring connected to the substrate by a metal stub.

Response to Arguments

Applicant's arguments with respect to claims 1-8 and 14-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Papers related to this application may be submitted to Technology center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax center located in Crystal Plaza 4, room 4-C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 2811 Fax Center number is (703) 308-7722 and 308-7724. The Group 2811 Fax Center is to be used only for papers related to Group 2811 applications.

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Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to *Examiner Nadav* whose telephone number is **(571) 272-1660**. The Examiner is in the Office generally between the hours of 7 AM to 3 PM (Eastern Standard Time) Monday through Friday.

Any inquiry of a general nature or relating to the status of this application should be directed to the **Technology Center Receptionists** whose telephone number is **308-0956**

A handwritten signature in black ink, appearing to read 'Ori Nadav', with a stylized flourish at the end.

O.N.
6/30/04

ORI NADAV
PATENT EXAMINER
TECHNOLOGY CENTER 2800